FOURTH FIVE-YEAR REVIEW REPORT FOR WOODSTOCK MUNICIPAL LANDFILL SUPERFUND SITE McHENRY COUNTY, ILLINOIS



Prepared by

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LIST OF ABBREVIATIONS & ACRONYMS

ARARs applicable or relevant and appropriate requirements

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

CFR Code of Federal Regulations COCs contaminants of concern

EPA United States Environmental Protection Agency

FYR five-year review

ICIAP Institutional Control Implementation and Assurance Plan

ICs institutional controls

IEPA Illinois Environmental Protection Agency

LTS long-term stewardship

MCLs maximum contaminant levels NCP National Contingency Plan NPL National Priorities List O&M operation and maintenance

OU operable unit

PCBs polychlorinated biphenyls

ppb parts per billion

PRPs potentially responsible parties

RA remedial action

RAOs remedial action objectives

RD remedial design RI remedial investigation

RI/FS remedial investigation/feasibility study

ROD Record of Decision

RPM Remedial Project Manager

Site Woodstock Municipal Landfill Superfund Site SMCLs secondary maximum contaminant levels

SVOCs semi-volatile organic compounds

TAL target analyte list TCL target compound list

UAO Unilateral Administrative Order

UECA Uniform Environmental Covenants Act UU/UE unlimited use and unrestricted exposure

VOCs volatile organic compounds

WMLS Woodstock Municipal Landfill Site

I. INTRODUCTION

The purpose of a five-year review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The United States Environmental Protection Agency (EPA) is preparing this FYR pursuant to Section 121 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), consistent with the National Contingency Plan (NCP)(40 CFR § 300.430(f)(4)(ii)), and considering EPA policy.

This is the Fourth FYR for the Woodstock Municipal Landfill Superfund Site (WMLS, or "Site"). The triggering action for this statutory FYR is the completion date of the previous FYR. The FYR has been prepared due to the fact that hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of one operable unit (OU) – OU1 – which comprises the site-wide remedy and is addressed in this FYR. The WMLS FYR was led by Frank Lagunas, EPA Remedial Project Manager (RPM). Participants included Janet Pope, EPA Community Involvement Coordinator, and Christopher Peters, Illinois Environmental Protection Agency (IEPA) project manager. The potentially responsible parties (PRPs) were notified of the initiation of the FYR. The FYR began on February 27, 2019.

Site Background

The Site is located on the south side of the City of Woodstock, Illinois, a municipality with a population of approximately 18,200 residents. The land surrounding the Site is used for residential, agricultural, commercial, and industrial purposes. The City of Woodstock wastewater treatment plant is located south of the Site. The land immediately adjacent to the Site includes wetlands and the Kishwaukee River headwaters.

The Site was first used as a trash dump and open burning area in 1935. The total volume of refuse currently in the landfill is estimated to be approximately 4.4 million cubic feet.

The City of Woodstock acquired the landfill property in 1968 and thereafter operated the landfill for disposal of household and municipal solid wastes and various industrial wastes, including waste paints and coating materials, plating wastes, solvents, waste metals, inks, and drummed material, including polychlorinated biphenyl (PCBs). The City of Woodstock discontinued landfill disposal activities at the Site in 1975, but used the property for land farming of municipal sewage sludge between 1983 and 1988.

FIVE-YEAR REVIEW SUMMARY FORM

Site Name: Woodstock Municipal Landfill				
EPA ID: ILD980605943	3			
Region: 5	State: IL	City/County: Woodstock/McHenry		
NPL Status: Final				
Multiple OUs? No Has the site achieved construction completion? Yes				
Lead agency: EPA				
Author name (Federal or State Project Manager): Frank Lagunas				
Author affiliation: EPA				
Review period: 2/27/201	9 - 7/12/2019			
Date of site inspection:	5/16/2019			
Type of review: Statutor	Type of review: Statutory			
Review number: 4				
Triggering action date:	8/19/2014			
Due date (five years afte	r triggering action o	late): 8/19/2019		

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

A baseline risk assessment was performed during the remedial investigation (RI). The results of the risk assessment indicated that hazardous substances at the Site posed an unacceptable cancer risk to trespassers through exposure to surface soils, specifically through ingestion or dermal contact with polyaromatic hydrocarbons. Regarding potential future land development, if the Site were developed as a park and recycling co-composting operation, exposure to surface soils would pose an unacceptable health risk. Consumption of the leachate/groundwater would also pose both an unacceptable cancer and non-cancer risk, primarily due to ingestion of cadmium, lead, nickel, zinc, arsenic, and beryllium. An unacceptable cancer and non-cancer risk would also be posed to off-site residents consuming groundwater contaminated with vinyl chloride and arsenic emanating from the landfill. The results of the baseline risk assessment provided the basis for taking action at the Site.

During an EPA contractor's sampling investigation in 1988, prior to the Site being listed on the National Priorities List (NPL), residential wells located downgradient of the landfill property were sampled and found to contain arsenic, selenium, and thallium at levels above the Safe Drinking Water Act's maximum contaminant levels (MCLs). Based on the results of EPA and IEPA investigations, and taking into account such factors as populations at risk, the presence of hazardous substances at the Site, the potential for contamination of drinking water supplies and the potential destruction of sensitive ecosystems, EPA placed the Site on the NPL on October 4, 1989.

In September 1989, the City of Woodstock and other PRPs entered into an Administrative Consent Order with EPA to perform a remedial investigation/feasibility study (RI/FS) for the Site. The RI/FS was concluded in June 1993.

The RI Report indicated that vinyl chloride was present in the groundwater at a level exceeding the MCL of 2 parts per billion (ppb). The average vinyl chloride concentration detected was approximately 20 ppb. Bis(2-ethylhexyl)phthalate was also detected in groundwater at a concentration of 5 ppb. Secondary MCLs (SMCLs), which are non-health-based guidelines for taste, odor, and appearance, were exceeded for iron, manganese, chloride, and total dissolved solids.

One test pit excavated during the RI yielded an intact drum containing PCBs (approximately 14 percent), toluene (approximately 2 percent), iron, mercury, and various volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs).

Contaminants in leachate gas and leachate samples collected during the RI included VOCs and SVOCs, such as chlorobenzene, 1,2-dichlorobenzene, naphthalene, benzoic acid, 1,4-dichlorobenzene, benzene, ethylbenzene, toluene, and xylene. The leachate concentrations for benzene and for several different inorganics, including arsenic, barium, chromium, copper, lead, mercury, and nickel, exceeded the associated MCLs for these contaminants.

Sediment samples collected during the RI from the surrounding wetlands and runoff areas from the landfill contained toluene at levels between 7 and 92 ppb, and several SVOCs, including bis(2-eihylhexyl)phthalate at 1200 ppb. Arsenic, barium, lead, magnesium, mercury, vanadium, selenium, copper, nickel, zinc, and chromium were detected at levels between 0.15 and 29,000 parts per million.

Soil samples collected during the RI from the landfill surface contained various inorganic compounds such as cadmium, copper, mercury, silver, and zinc, as well as the SVOCs benzo(b)fluoranthene and benzo(k)fluoranthene.

Response Actions

In April 1993, EPA published notice of the availability of the FS Report and Proposed Plan for public comment. After taking into consideration public comments received, EPA signed a Record of Decision (ROD) containing the Selected Remedy for the Site on June 30, 1993.

Based on results from the pre-design investigation at the Site and comments from interested parties, EPA decided to amend the 1993 ROD. A Proposed Plan for the ROD Amendment was made available for public comment, and EPA signed the ROD Amendment, with State concurrence, on July 15, 1998.

The objectives of the Selected Remedy were not clearly stated as remedial action objectives (RAOs) in the Site decision documents. However, the 1993 ROD included the following statement:

The primary purpose of this remedy is twofold: 1) to restore the contaminated groundwater to an acceptable level that will allow for its unrestricted use and 2) to cap the landfill, thereby minimizing the generation of leachate and eliminating the risk posed by the surface soils and sediments.

Additionally, the description of the Selected Remedy in the 1993 ROD included the following statement regarding vinyl chloride in groundwater:

The goal of this remedial action is to restore groundwater to its beneficial use, which is, at this site, a drinking water resource. Therefore, remediation will continue until such time that the MCL (and equivalent state standard) of 2 ppb is attained.

The 1998 ROD Amendment modified two components of the original remedy – the landfill cap and groundwater pump-and-treat requirements – but did not change the primary purpose and/or goals of the remedy as stated in the 1993 ROD. The ROD Amendment also included language that indicated that the intent of the remedy for groundwater was to achieve the vinyl chloride MCL of 2 ppb.

The components of the Selected Remedy, as revised by the 1998 ROD Amendment, included the following:

- Excavation and consolidation of contaminated soils, sediments and sludges under a landfill cap;
- Installation and maintenance of a geosynthetic landfill cap in compliance with the specifications set forth in the ROD Amendment (namely including the following: recontouring, regrading, and recompacting the existing cover; installation of a 40-mil low-density polyethylene liner; installation of a drainage layer; installation of a geofabric between the drainage layer and the soil cover above; installation of 24 inches of soil cover above the drainage layer, of which 6 inches must be topsoil; and final grading of the final cover to no less than 2% slope);
- Installation and maintenance of a landfill gas venting system that is compatible with the aforementioned landfill cap;
- Installation and operation of a groundwater extraction, treatment, and discharge system as a contingent component of the remedy, required only if natural attenuation of the vinyl chloride plume does not occur at a rate and to the degree acceptable under state and federal law;
- Development and implementation of a comprehensive monitoring program, including groundwater monitoring, to ensure the effectiveness of the remedy;
- Mitigation of wetland areas where contaminated sediment removal occurs;
- Mitigation of wetland damage or loss during or after remedial activities are complete;
- Development and implementation of a surface water and sedimentation control system;
- Fencing; and
- Implementation of institutional controls (ICs) to limit land and groundwater use.

Status of Implementation

On March 30, 1994, EPA issued special notice letters to several PRPs to enter into negotiations for a Consent Decree for remedial design (RD) and remedial action (RA) to implement the 1993 ROD. By letter on June 3, 1994, and as supplemented by a letter on June 7, 1994, the City of Woodstock (owner) and Allied Signal Corporation (generator) declined to implement the remedy as outlined in the 1993 ROD.

As noted earlier, EPA later issued a ROD Amendment on July 15, 1998. On November 3, 1999, after negotiations with the City of Woodstock and Allied Signal Corporation failed, EPA issued a Unilateral Administrative Order (UAO) to the City of Woodstock and Allied Signal Corporation to implement the Selected Remedy described in the 1998 ROD Amendment. The RD and the bulk of the RA work was completed pursuant to the 1999 UAO. Nearly eight years later, on October 31, 2007, a Consent Decree between the United States, the City of Woodstock and Honeywell International, Inc., was entered in federal district court. The Consent Decree required the PRPs to implement the remaining work at the Site, including operation and maintenance (O&M) of the remedy, wetlands restoration at the Site necessitated by the remedy, and groundwater monitoring.

Preliminary remedial construction by Conestoga-Rovers & Associates, a consultant for the PRPs, began on August 16, 1999, prior to the issuance of the UAO. The RA construction work for the primary remedy components, including excavation, consolidation in the landfill, installation of a landfill cap and landfill gas venting system, was completed in September 2000. Because all major construction activities were conducted satisfactorily, EPA issued a Preliminary Close Out Report on September 19, 2000, indicating completion of RA construction activities for the Site. Prior FYRs for the Site indicate that the wetland restoration activities required by the ROD Amendment started in 2005 and were completed prior to issuance of the Second FYR Report in August 2009.

On September 17, 1991, the City of Woodstock passed Resolution No. 635, which restricts wells of any kind, other than those approved by or required by EPA or IEPA as part of any Site remediation or monitoring work, and prohibits residential use and the construction of structures of any kind on the Site. The City filed Resolution No. 635 as a permanent covenant running with the land, and recorded the resolution in the Office of the McHenry County Recorder of Deeds on September 23, 1991.

In Fall 2005, with EPA approval, the City of Woodstock constructed a soccer complex on the Site in compliance with the Site's IC and remedy requirements. The complex consists of six rotating soccer fields and parking facilities, as shown in Figure 1.

Institutional Controls

A summary of the implemented and planned ICs for the Site is listed in Table 1 and the ICs are further discussed below. A map showing the area in which the ICs apply is included in Figure 1.

The Selected Remedy for the Site requires ICs for both land and groundwater. The areas requiring ICs include the Site property as well as off-site areas to which groundwater contamination has migrated in excess of cleanup criteria. The ICs at the Site should provide the following restrictions:

• There can be no residential, agricultural or commercial use of the Site except for such uses that already existed;

- That no excavation, construction, or drilling or any other activity that may damage any remedial action component can take place at the Site;
- That groundwater wells for drinking water or domestic purposes shall not be installed at the Site;
- That there shall be no use of the property that would allow the continuous presence of humans at the Site;
- That fencing and warning signs at the Site be maintained; and
- That no waste material from off-site shall be transported to the property.

Table 1: Summary of Planned and/or Implemented ICs

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Woodstock Municipal Landfill	Yes	Yes	Landfill property	Prohibit future residential, agriculture, and commercial uses except for site maintenance and to ensure integrity of the landfill cap.	City of Woodstock Resolution No. 635, 1991 (see Appendix E). Environmental covenant under the Illinois Uniform Environmental Covenants Act (UECA) (planned).
Remedy Components	Yes	Yes	Landfill property	Prohibit interference with remedy components except to perform maintenance tasks.	City of Woodstock Resolution No. 635, 1991 (see Appendix E). Environmental covenant under the Illinois UECA (planned).
On-site groundwater	Yes	Yes	Landfill property	Prohibit groundwater use until cleanup standards are met.	City of Woodstock Resolution No. 635, 1991 (see Appendix E). Environmental covenant under the Illinois UECA (planned).
Off-site groundwater (downgradient)	Yes	Yes	Off-site parcels	Prohibit groundwater use until cleanup standards are met.	Environmental covenant under the Illinois UECA, if necessary (planned).

Status of Access Restrictions and ICs

Access controls consist of a 6-foot barbed wire fence with a single locked access point controlled by City of Woodstock staff. In terms of ICs, the City of Woodstock filed Municipal Resolution 635 with the McHenry County Recorder of Deeds on September 23, 1991. Municipal Resolution 635 restricts

wells of any kind, nature or description, other than wells approved by or required by EPA or IEPA as part of any Site remediation or monitoring work, and prohibits residential use or construction of structures of any kind on the Site. However, the City could, at a future date, convey an interest in some or all of the Site to a new owner and the new owner or user could use the Site in a manner inconsistent with Resolution 635 and the restrictions listed above. Therefore, EPA and IEPA will require the PRP Group to record an environmental covenant under the Illinois UECA, 765 ILCS Ch. 122, to supplement Resolution 635 and implement the required restrictions.

The 2007 Consent Decree obliges the PRPs to use best efforts to obtain from owners of off-site properties agreements to impose use restrictions on properties beyond the Site boundary, including the prohibition on groundwater use until cleanup standards are met.

As identified in the 2014 FYR, the PRPs should prepare and submit an Institutional Control Implementation and Assurance Plan (ICIAP) to EPA for review and approval. The ICIAP should include the components outlined in EPA's ICIAP guidance. The ICIAP will evaluate the need for additional ICs to prevent groundwater use downgradient of the landfill while monitored natural attenuation is occurring. The ICIAP will include, as needed, updated maps depicting current conditions in areas that do not allow for UU/UE, review of recording and title work to ensure the restrictions are still recorded, and confirmation that no prior-in-time encumbrances exist on the Site that are inconsistent with the ICs. Additional activities required as part of an ICIAP will be to conduct additional IC evaluation activities to ensure that the implemented ICs are effective, to explore whether additional ICs are needed and, if so, to ensure their implementation, and to ensure that long-term stewardship (LTS) procedures are in place so that ICs are properly maintained, monitored, and enforced. LTS procedures should describe, at a minimum: (1) monitoring activities and schedules; (2) responsibilities for performing each task; (3) reporting requirements; and (4) a process for addressing any potential IC issues that may arise during the reporting period. The LTS procedures should be incorporated into the ICIAP or a revised O&M Plan.

Current Compliance

Based upon observations made during EPA's Site inspections and on EPA's review of the PRPs' Site inspection reports and recent Site data, current ICs are being complied with at the Site. No inappropriate land or groundwater use has been observed. There are no Site or media uses that are inconsistent with the stated objectives of the ICs and the Site cleanup goals.

IC Follow-up Actions Needed

As discussed above, several IC follow-up actions are needed. First, an ICIAP is needed for the Site. Second, LTS procedures need to be incorporated into the ICIAP or a revised O&M Plan. Third, an environmental covenant under the Illinois UECA to supplement Resolution 635 should be developed and recorded. See details in the *Status of Access Restrictions and ICs* discussion above.

Systems Operations/Operation & Maintenance

The PRPs are conducting long-term monitoring and maintenance activities in accordance with the O&M Plan approved by EPA on January 19, 1999. These activities include, but are not limited to, the following:

¹ *Institutional Controls: A Guide to Preparing Institutional Control Implementation and Assurance Plans at Contaminated Sites*, OSWER 9200.0-77: https://www.epa.gov/sites/production/files/documents/iciap_guidance_final_-_12.04.2012.pdf.

- Managing or monitoring effects of landfill settlement/consolidation;
- Maintaining the Site security fence;
- Maintaining the vegetative cover;
- Monitoring and maintaining the landfill cap; and
- Monitoring groundwater and surface water quality and landfill gas levels.

In accordance with the O&M Plan, the PRPs conduct monthly inspections of the landfill cover, channels, swales, culverts, access roads, and perimeter Site fence (except during periods of complete snow cover). The gas vents and gas monitoring probes are also visually inspected during the monthly inspections. In accordance with the O&M Plan, the PRPs conduct a more thorough inspection of the landfill cap on an annual basis. Groundwater monitoring wells are inspected during each groundwater monitoring event. Landfill cap maintenance is performed, as required, based on the results of the monthly or annual inspections. The PRPs submit an O&M Report to EPA on an annual basis that summarizes all the O&M activities conducted during the year. The O&M Plan also requires the PRPs to submit an annual report summarizing wetland monitoring activities and observations for purposes of assessing and reporting wetland mitigation progress to the agencies.

As with most landfills, settlement of the landfilled materials underneath the cap may occur, as well as differential settling of the cover material. As part of routine O&M activities, the PRPs inspect the landfill annually to determine if settlement has occurred. If settlement has occurred, the PRPs make arrangements to place additional fill material on those areas to return the cap to proper grade. Cover performance is monitored through periodic visual observations and by measuring consolidation or settlement at strategically-placed settlement platforms. The PRPs survey the elevation of survey markers on the platforms and note any differences from previous measurements to determine if settlement is occurring. Vegetation management includes reseeding or over-seeding of bare areas on an "as needed" basis and the control of weeds through periodic cutting/mowing. Unwanted small bushes and trees are cleared and grubbed as needed. The O&M Plan requires monitoring, inspections, and reporting of all O&M activities to EPA and IEPA on an annual basis. During this FYR period, as documented in the annual inspections and O&M reports, no settling occurred that required fill material.

Groundwater, Surface Water, and Landfill Gas Monitoring

Cleanup goals for groundwater are based on federal MCLs, federal SMCLs, and Illinois Class I and Class II groundwater quality criteria (35 IAC Part 620) for the contaminants of concern (COCs) identified for groundwater (see *Data Review* in Section IV). The groundwater cleanup goals are to be met at the waste boundary. Currently, the PRPs monitor groundwater and surface water quality biennially (every other year) and submit an "Annual Monitoring Report" to EPA for review and approval every other year.

In accordance with the approved O&M Plan, Site landfill gas (methane) monitoring was conducted monthly for one year following construction of the landfill cap. Monitoring of Site gas probes and gas vents was concluded in September 2001. Additional gas monitoring has not been conducted since 2001, although the vents and probes are visually inspected as described earlier. The passive venting system continues to provide a controlled release of methane to the atmosphere.

III. PROGRESS SINCE THE LAST REVIEW

This section includes the protectiveness determinations and statements from the last FYR as well as the recommendations from the last FYR and the current status of those recommendations.

Table 2: Protectiveness Determinations/Statements from the 2014 FYR

OU#	Protectiveness Determination	Protectiveness Statement
1/Sitewide	Short-term	The WMLS remedy is currently protective of human health and the environment in
	Protective	the short-term because the remedy is functioning as intended. Current Site use is
		consistent with the objectives set forth in the ROD and ROD Amendment, ICs are in
		place that prohibit interference with the existing cover and limit future groundwater
		use, the cover prevents contact with hazardous waste, and exposures are not
		occurring. However, in order for the remedy to be protective of human health and
		the environment over the long-term, an IC plan must be developed to assure long-
		term stewardship of the Site and an environmental covenant under the Illinois
		Uniform Environmental Covenants Act (UECA) should be recorded to supplement
		existing ICs to prohibit future residential, agricultural, or commercial use of the Site,
		yet allow for maintenance of the landfill cap.

Table 3: Status of Recommendations from the 2014 FYR

O U #	Issue	Recommendation	Current Status	Current Implementation Status Description	Completion Date (if applicable)
1/Sitewide	An ICIAP has not been developed for the WMLS.	The PRP group should submit an ICIAP for EPA approval.	Ongoing	EPA will request that the PRPs develop and submit an ICIAP. This is carried forward as an issue and recommendation in this FYR.	N/A
1/Sitewide	An environmental covenant under the Illinois UECA should be recorded for the WMLS.	The PRP Group should record an environmental covenant under the Illinois UECA to supplement existing ICs at the WMLS.	Ongoing	EPA will request that the PRPs execute and record a UECA environmental covenant for the Site. This is carried forward as an issue and recommendation in this FYR.	N/A

N/A = not applicable

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

Public notice was made available by placing an advertisement in the Daily Herald on July 12, 2019 (see Appendix G), stating that there was a FYR and inviting the public to submit any comments to EPA. EPA received no comments or concerns from the public about the Site during this FYR. EPA also updated the Site web page found at http://www.epa.gov/region5/cleanup/woodstock. The results of the review and the FYR report will be made available at the Site information repository located at the Woodstock

Public Library, 414 Judd St., Woodstock, Illinois 60098. The FYR report will also be posted on the Site web page.

No interviews of local community residents were conducted during the FYR or the most recent Site inspection. The Site representative for the City of Woodstock indicated there have been no reported problems pertaining to the Site or the remedy, and that the soccer fields are rotated periodically to minimize wear and tear on grass fields.

Data Review

Appendix A lists the documents reviewed during this FYR process. The analytical data reviewed includes the results of the biennial groundwater and surface water monitoring conducted in 2014, 2016, and 2018.

Groundwater

Groundwater samples were analyzed for target compound list (TCL) VOCs, target analyte list (TAL) metals, and general chemistry parameters (i.e., total alkalinity, chloride, hardness, nitrogen [as ammonia] and sulfate). Overall, the results of the groundwater monitoring events during this FYR period were generally consistent with historical groundwater results and/or trends since implementation of the remedy.

As shown in Figure 2, the general direction of groundwater flow at the Site is toward the southwest. As evidenced by the groundwater RAO described in the Response Actions portion of Section II above, vinyl chloride is the primary COC in groundwater. Figure 3 shows the 2018 groundwater monitoring results for VOCs. The only VOC to exceed federal and state groundwater criteria was vinyl chloride in wells MW-4D and MW-8. Vinyl chloride was detected at 3 of the 10 monitoring wells that were sampled (MW-4D, MW-8, and MW-9). Concentrations of vinyl chloride in MW-4D and MW-8, located at the downgradient end of the landfill, had been following a generally decreasing trend for about the past 20 years, with concentrations dropping below the MCL of 2 ppb around 2010. During 2016 and 2018, however, the vinyl chloride concentrations in these two wells showed a slight increase, with the concentrations rising slightly above the MCL in 2018 (2.4 ppb in MW-8; 2.1 ppb in the duplicate sample from MW-4D). The plots presented in Appendix B (MW-4D) and Appendix C (MW-8) show the vinyl chloride trends over time in these two wells since monitoring began in 1990 as part of the RI. The vinyl chloride concentrations in MW-9, which is located downgradient of MW-4D and MW-8, have historically fluctuated and have never exceeded the MCL. However, the 2018 result (1.3 ppb) was higher than than any previous detection at that well. Continued monitoring will determine whether the slight increase in vinyl chloride concentrations at these three wells represents a developing trend or a short-term fluctuation.

Arsenic, iron, manganese, and thallium were the only TAL metals found to exceed at least one of the relevant groundwater quality standards (MCLs, SMCLs, Illinois Class I or Illinois Class II groundwater quality criteria) during the 2018 monitoring event. These detections are generally consistent with historical results or show declining trends since implementation of the remedy. Table 4, below, shows the exceedances during the 2014, 2016 and/or 2018 monitoring events reviewed during this FYR. For comparison purposes, the table also shows any 2002 (baseline year) exceedances. Arsenic was detected at MW-1SR (30 ppb and 28 ppb duplicate) in the 2018 monitoring event. Arsenic concentrations have historically fluctuated at MW-1SR.

Table 4: TAL Metals Results Exceeding Relevant Groundwater Quality Standards

COC and Associated Standards	Range of Exceedances (Date) and Location	COC and Associated Standards	Range of Exceedances (Date) and Location
Arsenic MCL = 10 ppb	30 ppb (2018) in MW-1SR 27 ppb (2016) in MW-1SR 25 ppb (2014) in MW-1SR 17.7 ppb (2002) in MW-1SR	Manganese CL I = 150 ppb CL II = 10,000 ppb SMCL = 50 ppb	57-140 ppb (2018) in MW-1D, 4D, 9, 13 51-140 ppb (2016) in MW-1D, 1SR, 2S, 4D, 5D, 9, 13 52-140 ppb (2014) in MW-1D, 1SR, 2S, 4D, 9, 13 63-186 ppb (2002) in MW-1D, 1SR, 2S, 4D, 9, 13
Iron CL I = 5000 ppb CL II = 5000 ppb SMCL = 300 ppb	1,600-9,000 ppb (2016) in all MWs sampled: 1D, 1SR, 2D, 2S, 4D, 5D, 8, 9, 12, 13	CLI = 2 ppb CL II = 20 ppb	

Notes: CL I = Illinois Class I groundwater quality criteria

CL II = Illinois Class II groundwater quality criteria

MW = Monitoring Well

MCL = Maximum Contamination Level

SMCL = Secondary MCL (taste, odor, appearance)

Surface Water

During this review period, only two VOCs (acetone and 2-butanone) were detected at low estimated concentrations in the upstream and/or downstream surface water samples but both were well below pertinent surface water criteria (in this case, the IEPA surface water criteria for acute/chronic² toxicity).

• 2018 – No TCL VOCs were detected in upstream or downstream samples.

² Note: Whether considering IEPA or EPA surface water criteria, the chronic criterion for any particular constituent is usually more stringent (i.e., a lower number) than the acute criterion, although in some cases they are the same.

- 2016 2-Butanone was detected in both upstream and downstream samples at similar estimated concentrations (1.2 and 1.3 ppb, respectively), orders of magnitude below the IEPA chronic criterion of 26,000 ppb. Acetone was also detected in both upstream and downstream samples at similar estimated concentrations (6.5 and 6.1 ppb, respectively), orders of magnitude below the IEPA chronic criterion of 120,000 ppb.
- 2014 Acetone was detected only in the upstream sample at a low estimated concentration (3.6 ppb).

Consistent with historical sampling events, during this reporting period a number of TAL metals were detected in the upstream and/or downstream samples, and consistent with historical results, a few metals exceeded the pertinent surface water criteria for chronic toxicity.

- 2018 Total iron at the upstream location (1,900 ppb) and the downstream location (3,300 ppb) exceeded the EPA chronic criterion of 1,000 ppb. Aluminum (93 ppb) at the downstream location exceeded the EPA chronic criterion of 87 ppb.
- 2016 Total iron at the upstream location (2,700 ppb) exceeded the EPA chronic criterion of 1,000 ppb, while at the downstream location both dissolved iron (2,200 ppb) and total iron (4,500 ppb) exceeded criteria (IEPA acute and chronic criteria are 1,000 ppb for dissolved iron; EPA chronic criterion for total iron is 1,000 ppb).
- 2014 At the upstream location, dissolved aluminum (100 ppb) exceeded the EPA chronic criterion of 87 ppb, cadmium (estimated at 0.42 ppb) exceeded the EPA chronic criterion of 0.25 ppb, and dissolved and total iron (1,200 ppb and 3,800 ppb, respectively) exceeded their pertinent criteria (1,000 ppb; see 2016 bullet above).

Data Review Conclusion

EPA's review of all available data indicates that the contaminants contained within the landfill are remaining in place and that levels of the COCs in groundwater and surface water remain below action levels that would cause EPA to require a groundwater pump-and-treat system be installed pursuant to the 1998 ROD Amendment. However, groundwater COC levels remain above cleanup criteria. Vinyl chloride, which is the main groundwater COC, had been following a generally decreasing trend for about the past 20 years, but as discussed above and depicted in Appendices B and C, rose slightly above its MCL in 2018 at two wells at the downgradient end of the landfill. Continued monitoring will determine whether this is a developing trend or a short-term fluctuation.

Site Inspection

The FYR inspection of the Site was conducted on 5/16/2019. The Site Inspection Checklist and photos are presented in Appendix D. In attendance were EPA RPMs Frank Lagunas (assigned to this Site) and Michael Berkoff (a senior RPM), IEPA project manager Christopher Peters, and City of Woodstock representative Jeff Van Landuyt. The purpose of the inspection was to assess the protectiveness of the remedy.

The landfill cap, gas vents, and monitoring wells were found to be in good condition, as were security, fencing, and warning signs. Small bare spots around a few gas vents and minor erosion in the northeast corner of the landfill, first identified during the Annual Inspection on December 5, 2018, were observed. The Site remains in use as a six-field soccer complex and there have otherwise been no reported problems pertaining to the Site or the remedy.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Answer: Yes. The remedy is functioning as intended by the decision documents. However, additional actions are required in order to ensure it continues functioning as intended.

EPA's review of documents, Site applicable or relevant and appropriate requirements (ARARs), risk assessment assumptions, the results of the Site inspections, and groundwater and surface water monitoring results indicates that the remedy is functioning as intended by the decision documents. The landfill cap has minimized the migration of contaminants to groundwater and surface water and is preventing direct contact with the contaminated waste materials, soils and sediments. There are no operating active systems at the Site, however the passive gas venting system continues to function as intended. The groundwater monitoring well network is sufficient to measure the status of the contaminant plume. Groundwater is impacted by VOCs and metals on the Site; however, these compounds do not appear to be migrating off-site and do not currently threaten drinking water supplies. Concentrations of vinyl chloride, the main groundwater COC, have been following a generally decreasing trend since implementation of the remedy and fell below the MCL by 2010. However, vinyl chloride concentrations at the downgradient end of the landfill have shown a slight increase over the past three monitoring events (2014, 2016 and 2018), rising slightly above the MCL in 2018. Continued monitoring and evaluation is required to ensure that concentrations do not follow an increasing trend.

ICs in the form of a municipal resolution are in place to prevent groundwater use on-site and prohibit interference with the landfill cap. However, the ICs should be strengthened by developing and recording an environmental covenant under the Illinois UECA. Additionally, an ICIAP should be developed, and LTS procedures should be developed and included in the ICIAP or a revised O&M Plan.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of the remedy selection still valid?

Answer: Yes.

There have been no changes in the physical conditions of the Site that would affect the protectiveness of the remedy. There have been no changes in exposure pathways, exposure assumptions, contaminant toxicity or other contaminant characteristics that could affect the protectiveness of the remedy. The cleanup levels and RAOs established by the Site decision documents remain valid. There have been no changes in standards or "to be considered" advisories that would affect the protectiveness of the remedy.

QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?

Answer: No. No additional information has come to light that could call into question the protectiveness of the remedy. EPA has not identified any potential impacts to the Site resulting from climate change or natural disasters.

VI. ISSUES/RECOMMENDATIONS

Issues and Recommendations Identified in the Five-Year Review:

OU(s):	Issue Category: Institutional Controls				
	Issue: An ICIAP ha	Issue: An ICIAP has not been developed for the Site.			
	Recommendation: The PRP Group should submit an ICIAP for EPA approval.				
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date	
No	Yes	PRP	EPA/State	9/30/2021	

OU(s):	Issue Category: Institutional Controls				
	Issue: An environmental covenant under the Illinois UECA should be recorded for the Site.				
	Recommendation: The PRP Group should record an environmental covenant under the Illinois UECA to supplement existing ICs at the WMLS.				
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date	
No	Yes	PRP	EPA/State	9/30/2021	

OU(s):	Issue Category: Institutional Controls			
	Issue: LTS procedures are needed to ensure that effective ICs are monitor maintained and enforced. Recommendation: Develop LTS procedures and incorporate them into an or revised O&M Plan, including procedures for monitoring and tracking compliance with existing ICs, communicating with EPA, and providing ar certification to EPA that the ICs remain in place and are effective.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	PRP	EPA/State	9/30/2021

OTHER FINDINGS

In addition, the following observations and recommendation related to maintenance of the landfill was identified during the FYR Site Inspection and may improve performance of the remedy and/or management of O&M, but does not affect current or future protectiveness:

Bare spots observed on the cap around a few vents on the south perimeter of the landfill may
indicate pooling and or puddling of rain water runoff near the vents. Additionally, some erosion
in the northeast corner of the landfill required repair. These areas should be addressed and then
maintained to ensure the continued integrity of the cap and vent seals and to prevent rainwater
infiltration through the cap in these locations.

VII. PROTECTIVENESS STATEMENT

OU1 and Sitewide Protectiveness Statement

Protectiveness Determination:

Short-term Protective

Protectiveness Statement:

The remedy at the Site currently protects human health and the environment because exposure pathways that could result in unacceptable risk are being controlled through engineering controls (such as the landfill cap) and ICs. Current site use is consistent with the objectives set forth in the Site decision documents, ICs in the form of a municipal resolution are in place to prevent groundwater use on-site and prohibit interference with the landfill cap. However, in order for the remedy to be protective in the long term, the following actions need to be taken to ensure protectiveness: an ICIAP should be submitted for EPA approval; an environmental covenant under the Illinois UECA should be developed and recorded; and LTS procedures need to be developed and incorporated into an ICIAP or revised O&M Plan, including procedures for monitoring and tracking compliance with existing ICs, communicating with EPA, and providing an annual certification to EPA that the ICs remain in place and are effective.

VIII. NEXT REVIEW

The next FYR report for the Site is required within five years from the completion date of this review.

Figure 1 - Woodstock Municipal Landfill Site

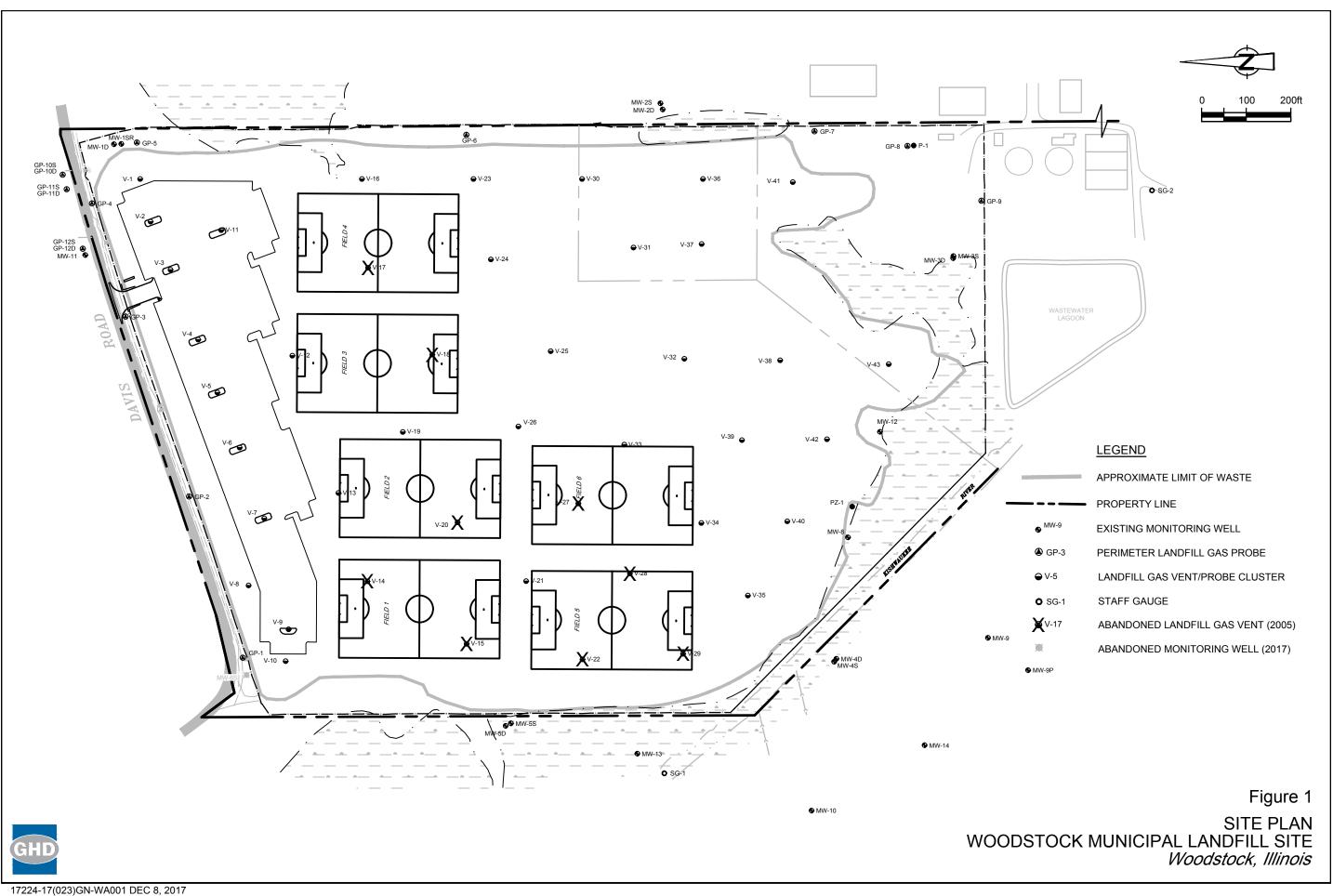


Figure 2 - Groundwater Contours

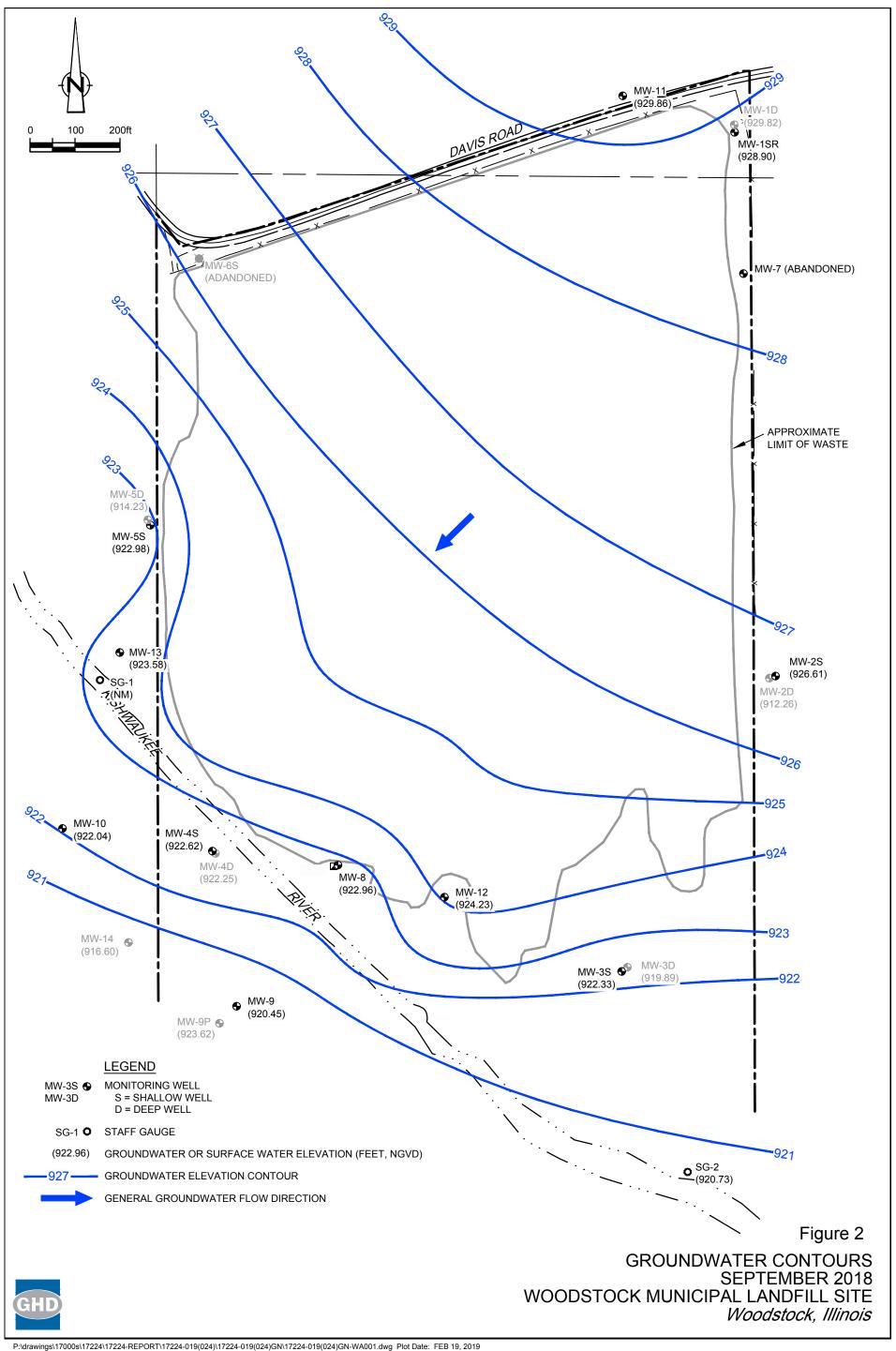
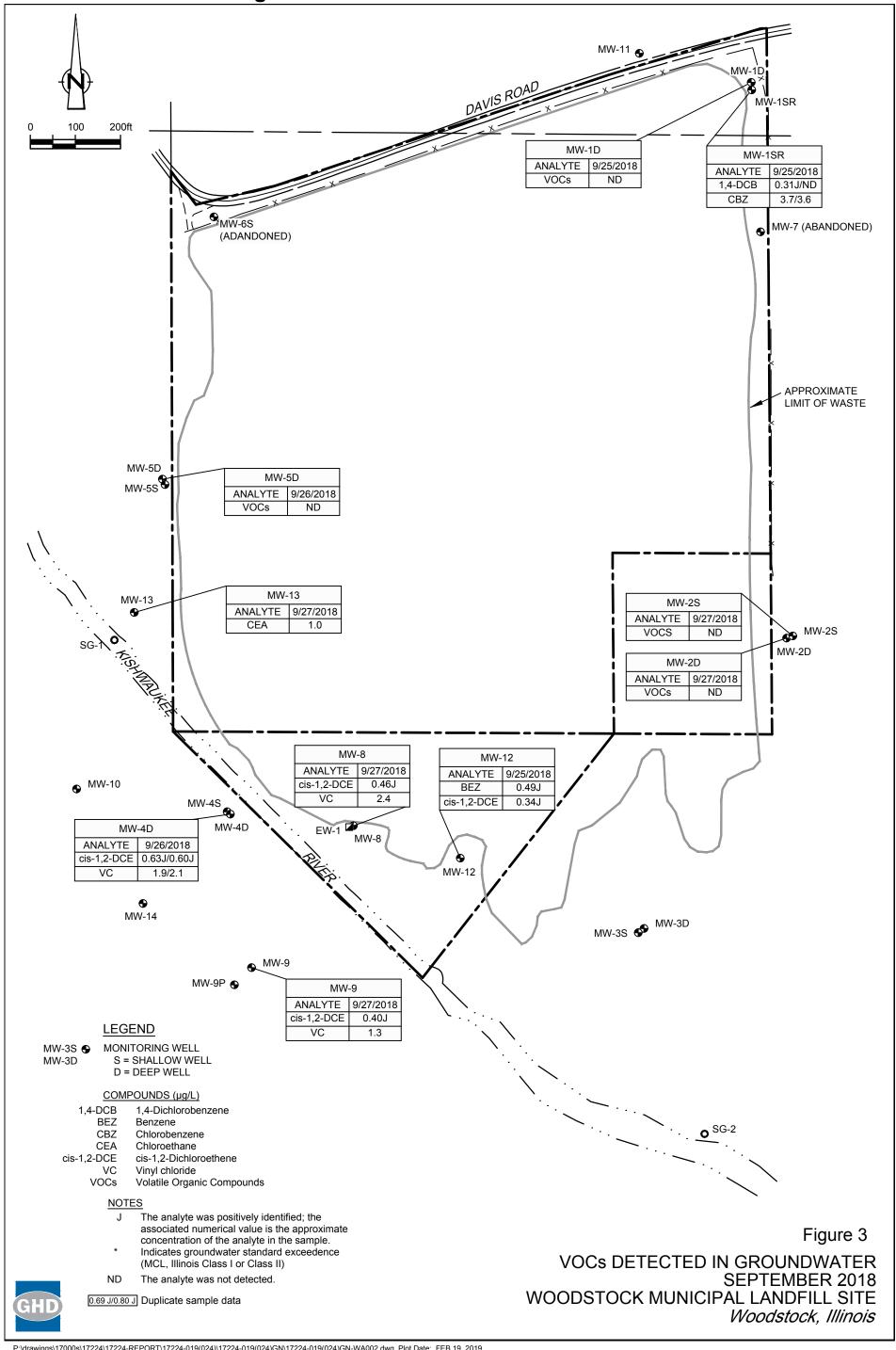


Figure 3 - VOCs Detected in Groundwater



Appendix A

List of Reviewed Documents for Woodstock Municipal Landfill Site's Fourth Five-Year Review

1st FYR 08-23-2004 Woodstock

2nd FYR 08-20-2009 Woodstock

3rd FYR 08-19-2014 Woodstock

IEPA ROD Review 6-17-1993

Record of Decision 6-30-1993

ROD Amendment 7-15-1998

Preliminary Site Close Out Report 9-19-2000

Consent Decree10-31-2007

2018 Annual Monitoring Report

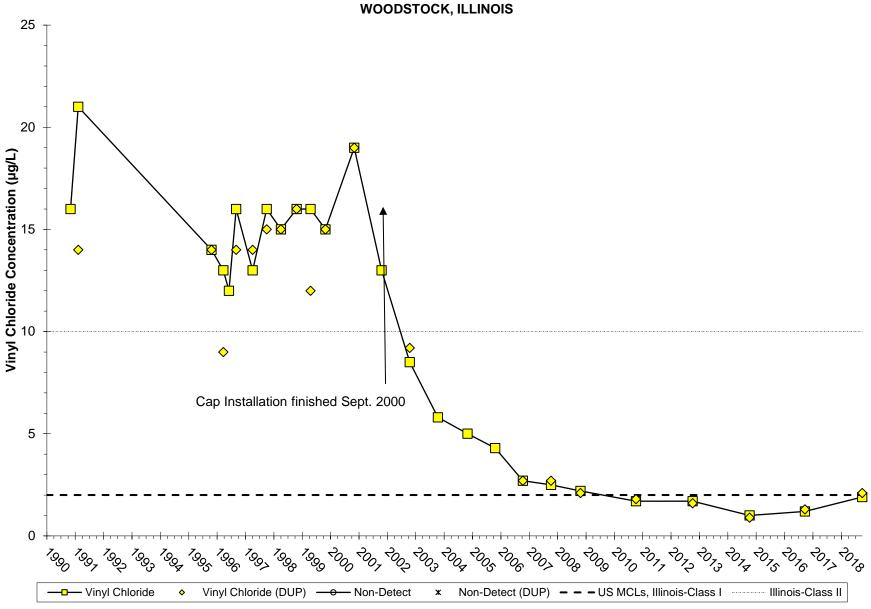
2016 Annual Monitoring Report

2014 Annual Monitoring Report

Operation & Maintenance Plan1-19-1999

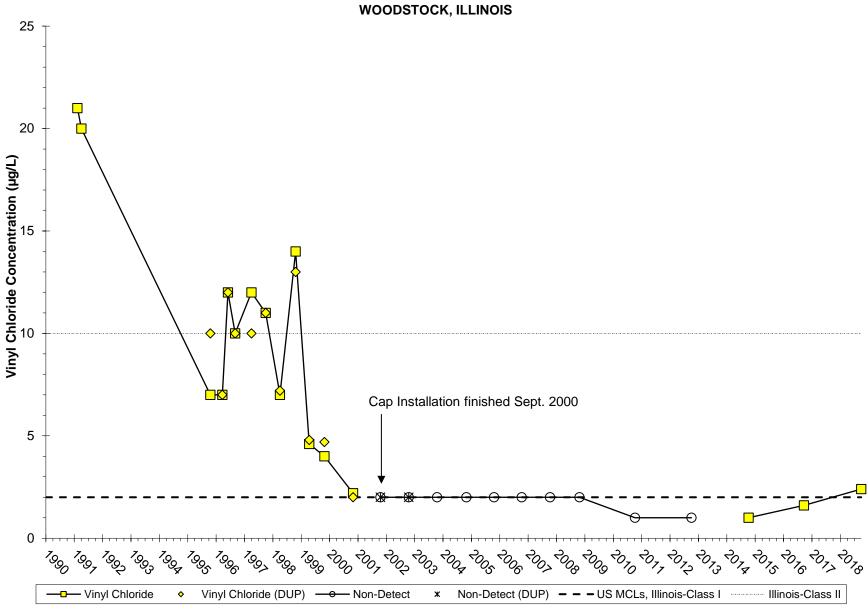
Appendix B

PLOT OF VINYL CHLORIDE CONCENTRATION vs. TIME
MONITORING WELL MW-4D
2018 ANNUAL MONITORING EVENT
WOODSTOCK MUNICIPAL LANDFILL SITE
WOODSTOCK, ILLINOIS



Appendix C

PLOT OF VINYL CHLORIDE CONCENTRATION vs. TIME
MONITORING WELL MW-8
2018 ANNUAL MONITORING EVENT
WOODSTOCK MUNICIPAL LANDFILL SITE
WOODSTOCK. ILLINOIS



Appendix D Site Inspection Checklist

I. SITE INFORMATION			
Site name: Woodstock Municipal Landfill	Date of inspection: May16, 2019		
Location and Region: R5	EPA ID: ILD980605943		
Agency, office, or company leading the five-year review: US EPA	Weather/temperature: Clear and 70°F		
□ Access controls □	Monitored natural attenuation Groundwater containment Vertical barrier walls		
Attachments: Inspection team roster attached	⊠ Site map attached		

II. INTERVIE	EWS (Check all that apply)	
1. O&M site manager _Eric Hogland Name Interviewed □at site □at office ⊠by phone Problems, suggestions; □Report attached	Title Phone no(612) 524-6835	Date
2. O&M staff _Jeff Van_Landyut Name Interviewed: ⊠at site □at office □by phone Problems, suggestions; □Report attached	Title Phone no(815) 338-6118	Date
3. Local regulatory authorities and response office, police department, office of public I deeds, or other city and county offices, etc. AgencyIEPA ContactChris PetersPresolvent Problems; suggestions; □Report attached AgencyContactName Problems; suggestions; □Report attached	health or environmental health, zoni Dill in all that apply. Toject Manager5-16-2019 Title Date Title D Title D Title D Title D	ate Phone no.
4. Other interviews (optional) □ Report att	ached.	
None		
III. ON-SITE DOCUMENTS & 1	RECORDS VERIFIED (Check al	l that apply)

1.	O&M Documents ⊠ O&M manual ⊠ As-built drawings ⊠ Maintenance logs Remarks	☑ Readily available☑ Readily available☑ Readily available	☐ Up to date ☐ Up to date ☐ Up to date	□ N/A □ N/A □ N/A	-
2.	Site-Specific Health and Safety P ⊠ Contingency plan/emergency res Remarks: The City has a communit	sponse plan Readily a	vailable 🗆 Up to		-
3.	O&M and OSHA Training Recor Remarks: The City's public works or receive OSHA Haz Mat training				yee
4.	Permits and Service Agreements ☐ Air discharge permit ☐ Effluent discharge ☐ Waste disposal, POTW ☐ Other permits Remarks	☐ Readily available ☐ Readily available ☐ Readily available ☐ Readily available	☐ Up to date	⊠ N/A ⊠ N/A ⊠ N/A ⊠ N/A	-
5.	Gas Generation Records Remarks	☐ Readily available	☐ Up to date	⊠ N/A	-
6.	Settlement Monument Records Remarks	☐ Readily available	☐ Up to date	⊠ N/A	-
7.	Groundwater Monitoring Record Remarks	ls ⊠ Readily available	☑ Up to date	□ N/A	-
8.	Leachate Extraction Records Remarks	☐ Readily available	☐ Up to date	⊠ N/A	-
9.		ily available □Up to d ily available □ Up to d			-
10.	Daily Access/Security Logs Remarks	☐ Readily available	☐ Up to date	⊠ N/A	-

IV. O&M COSTS				
1.	O&M Organiz: ☐ State in-hous: ☐ PRP in-hous: ☐ Federal Facil ☑ OtherPubl	e e ity in-house	☐ Contractor for State ☐ Contractor for PRP ☐ Contractor for Feder Woodstock	ral Facility
2.	O&M Cost Rec ⊠Readily avails □ Funding med Original O&M o	able	=	eakdown attached period if available
	From Date From Date From Date	To Date To Date To Date To Date To Date Date To Date To Date	Total cost Total cost Total cost	□ Breakdown attached □ Breakdown attached □ Breakdown attached □ Breakdown attached
	FromDate FromDate	To	Total cost Total cost	_ □ Breakdown attached
3.		or Unusually Hig and reasons:N	gh O&M Costs During R N/A	Review Period

	V. ACCESS AND INSTITUTIONAL CONTROLS ⊠ Applicable □ N/A	
A.	Fencing	
1.	Fencing damaged ⊠ Location shown on site map ⊠ Gates secured □ N/A Remarks: Fences are in working condition and only minor repairs scheduled due to down tree branch damage	
В.	Other Access Restrictions	
1.	Signs and other security measures ☐ Location shown on site map ☐ N/A Remarks	
C.	Institutional Controls (ICs)	
1.	Implementation and enforcement	
1.	Site conditions imply ICs not properly implemented \Box Yes \boxtimes No \Box N/A Site conditions imply ICs not being fully enforced \Box Yes \boxtimes No \Box N/A	
	Type of monitoring (e.g., self-reporting, drive by) _On-site walk through Frequency Weekly during recreational periods and Monthly during office season for O&M and as needed Responsible party/agency City of Woodstock Public Works	
	Contact Jeff Van Landyut Director of Public Works (815) 338-6118	
	Name Title Date Phone no.	_
		N/A N/A
	1 1	N/A N/A
2		
2.	Adequacy □ ICs are adequate □ ICs are inadequate □ N/A Remarks □ Remarks □ ICs are inadequate □ N/A □ N/A	
D.	General	
1.	Vandalism/trespassing ☐ Location shown on site map ☐ No vandalism evident Remarks	
2.	Land use changes on site 🗵 N/A Remarks	

3.	Land use changes off site Remarks	e ⊠ N/A	-
		VI. GENERAL SITE CONDITIONS	
A. Roa	ds	□ N/A	
1.		\square Location shown on site map \square Roads adequate \square N/A	-
B. Oth	er Site Conditions		
	weather event, and mic cap has not been comp scheduled to be added	ncing repair on northeast side due to down tree branch during inor erosion on northeast side of parking lot. However, fencing promised and all repairs scheduled for the spring 2020. Fill ear l around gas vents to improve gradient and prevent possible pu	th
			- - -
	VII.	. LANDFILL COVERS ⊠ Applicable □ N/A	
A. Lan	dfill Surface		
1.	Settlement (Low spots) Areal extent Remarks	☐ Location shown on site map ☐ Settlement not evident ☐ Depth ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	
2.	Cracks Lengths Remarks	☐ Location shown on site map Widths Depths ☐ Cracking not evident	
3.	Erosion Areal extent10feet_ Remarks: Small channeling	☐ Location shown on site map ☐ Erosion not evident ☐ Depth<6inches ng near northeast side of parking lot cap not compromised	
4.	Holes Areal extent Remarks	☐ Location shown on site map ☐ Holes not evident ☐ Depth	-
5.	Vegetative Cover ☐ Trees/Shrubs (indicate segments)	☐ Grass ☐ Cover properly established ☐ No signs of stress size and locations on a diagram)	- -

6.	Alternative Cover (armored roc Remarks	k, concrete, etc.) 🛮 🖾 N/A		
7.		☐ Location shown on site 1 Height		
8.	Wet Areas/Water Damage ☐ Wet areas ☐ Ponding ☐ Seeps ☐ Soft subgrade Remarks	□ Wet areas/water damage □ Location shown on site to □ Location shown on site to □ Location shown on site to □ Location shown on site to	map Areal extent map Areal extent map Areal extent map Areal extent	
9.	Slope Instability	☐ Location shown on site i	•	
В.	Benches		o landfill side slope to inter and convey the runoff to a	rupt the slope in lined channel.)
1.	Flows Bypass Bench Remarks	☐ Location shown on site	*	•
2.	Bench Breached Remarks	☐ Location shown on site r	-	•
3.	Bench Overtopped Remarks	☐ Location shown on site	•	r okay
C.	Letdown Channels ☐ Applicable (Channel lined with erosion control slope of the cover and will allow t without creating erosion gullies.)			
1.	Areal extent	ation shown on site map Depth	☑ No evidence of settleme	nt
2.	Material Degradation ☐ Loc. Material type Remarks	Areal extent	☑ No evidence of degrada _	tion
3.	Erosion	Depth	☑ No evidence of erosion	

4.	Undercutting		of undercutting
5.	Obstructions TypeAre SizeRemarks	eal extent	
6.	☑ No evidence of excessive growth☐ Vegetation in channels does not obstruct flow	eal extent	
D. Cov	er Penetrations		
1.	Gas Vents □ Active ⊠ Pass: ☑ Properly secured/locked □ Functioning □ Evidence of leakage at penetration Remarks □	☐ Routinely sampled ☐ Needs Maintenance	□ N/A
2.	Gas Monitoring Probes ⊠ Properly secured/locked □ Functioning □ Evidence of leakage at penetration Remarks	☐ Needs Maintenance	☐ Good condition ☐ N/A
3.	Monitoring Wells (within surface area of landfill) ☑ Properly secured/locked ☐ Functioning ☐ Evidence of leakage at penetration Remarks	☐ Routinely sampled ☐ Needs Maintenance	☐ Good condition ☐ N/A
4.	Leachate Extraction Wells ☐ Properly secured/locked ☐ Functioning ☐ Evidence of leakage at penetration Remarks	☐ Routinely sampled ☐ Needs Maintenance	☐ Good condition ☑ N/A
5.	Settlement Monuments	☐ Routinely surveyed	⊠ N/A
E. Gas	Collection and Treatment Applicable	⊠ N/A	
1.	Gas Treatment Facilities ☐ Flaring ☐ Thermal destruction ☐ Good condition ☐ Needs Maintenance Remarks	☐ Collection for reuse	

2.		☐ Needs Maintenance		
3.	☐ Good condition	es (e.g., gas monitoring of adjacent Needs Maintenance N/A		
F. Cov	ver Drainage Layer	☐ Applicable ⊠ N/A	L .	
1.	Outlet Pipes Inspected Remarks	☐ Functioning		
2.	-	☐ Functioning	□ N/A	
G. De	tention/Sedimentation Por	nds	⊠ N/A	
1.	Siltation Areal extent Siltation not evident Remarks		□ N/A	
2.	☐ Erosion not evident	xtent Depth		-
3.		☐ Functioning ☐ N/A		-
4.	Dam Remarks	☐ Functioning ☐ N/A		-
H. Re	taining Walls	☐ Applicable N/A		-
1.	Deformations Horizontal displacement_ Rotational displacement_	☐ Location shown on site map	ement	
2.	Degradation Remarks	☐ Location shown on site map	· ·	
I. Peri	imeter Ditches/Off-Site Di	scharge	⊠ N/A	
1.	Siltation	ation shown on site map ☐ Siltatio Depth	n not evident	

2.	Vegetative Growth □ Location shown on site map □ N/A □ Vegetation does not impede flow Areal extent Type Remarks	
3.	Erosion	
4.	Discharge Structure ☐ Functioning ☐ N/A Remarks	
	VIII. VERTICAL BARRIER WALLS □ Applicable ☒ N/A	
1.	Settlement	
2.	Performance Monitoring Type of monitoring □ Performance not monitored Frequency □ Evidence of breaching Head differential □ Remarks □	
	IX. GROUNDWATER/SURFACE WATER REMEDIES ☐ Applicable ☒ N/A	
A. Gro	oundwater Extraction Wells, Pumps, and Pipelines Applicable N/A	
1.	Pumps, Wellhead Plumbing, and Electrical ☐ Good condition ☐ All required wells properly operating ☐ Needs Maintenance ☐ N/A Remarks	
2.	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances Good condition Needs Maintenance Remarks	
3.	Spare Parts and Equipment □ Readily available □ Good condition □ Requires upgrade □ Needs to be provided Remarks	
B. Sur	face Water Collection Structures, Pumps, and Pipelines ☐ Applicable ☒ N/A	
1.	Collection Structures, Pumps, and Electrical ☐ Good condition ☐ Needs Maintenance Remarks	

2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances Good condition Needs Maintenance Remarks	
3.	Spare Parts and Equipment □ Readily available □ Good condition □ Requires upgrade □ Needs to be provided Remarks □	
C. Tre	eatment System	
1.	Treatment Train (Check components that apply) ☐ Metals removal ☐ Oil/water separation ☐ Bioremediation ☐ Air stripping ☐ Carbon adsorbers ☐ Filters	
	☐ Additive (e.g., chelation agent, flocculent)	
	☐ Good condition ☐ Needs Maintenance ☐ Sampling ports properly marked and functional ☐ Sampling/maintenance log displayed and up to date ☐ Equipment properly identified ☐ Quantity of groundwater treated annually	
2.	Electrical Enclosures and Panels (properly rated and functional) □ N/A □ Good condition □ Needs Maintenance Remarks	
3.	Tanks, Vaults, Storage Vessels □ N/A □ Good condition □ Proper secondary containment □ Needs Maintenance Remarks □	
4.	Discharge Structure and Appurtenances □ N/A □ Good condition □ Needs Maintenance Remarks □	
5.	Treatment Building(s) □ N/A □ Good condition (esp. roof and doorways) □ Needs repair □ Chemicals and equipment properly stored Remarks	
6.	Monitoring Wells (pump and treatment remedy) ☑ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☒ Good condition ☐ All required wells located ☐ Needs Maintenance ☐ N/A Remarks ☐ Image: Routinely sampled ☐ N/A	
D. Mon	nitoring Data	

1.	Monitoring Data ⊠ Is routinely submitted on time □ Is of acceptable quality
2.	Monitoring data suggests: ⊠ Groundwater plume is effectively contained □ Contaminant concentrations are declining
E. M	onitored Natural Attenuation
1.	Monitoring Wells (natural attenuation remedy) □ Properly secured/locked □ Functioning □ Routinely sampled □ Good condition □ N/A □ N/A
	X. OTHER REMEDIES
	If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.
	XI. OVERALL OBSERVATIONS
A.	Implementation of the Remedy
	Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.). Remedy is effective and functioning as designed Remedy is effective and functioning as designed
В.	Adequacy of O&M
	Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.
	O&M is effective and protective of remedy
C.	Early Indicators of Potential Remedy Problems
	Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.
	NA
D.	Opportunities for Optimization
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.
	NA

PHOTOS DOCUMENTING SITE CONDITIONS

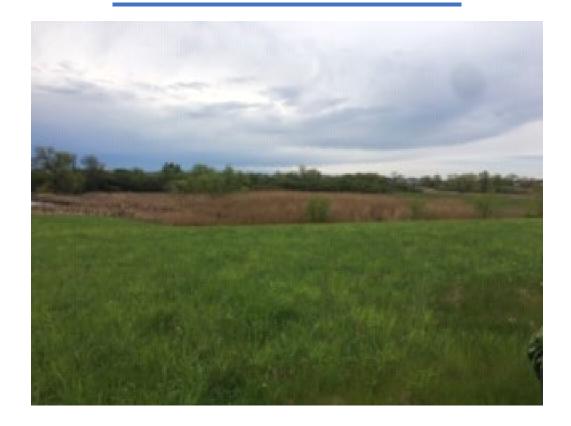
View from parking lot pointing southeast overlooking soccer fields



View from parking lot pointing south overlooking soccer fields



View from south perimeter of site overlooking wetlands



View from west perimeter of site overlooking wetlands



Northeast view of site overlooking soccer fields



Representative passive gas vent secure and in working condition on southwest side of site



Representative sampling well secure and in working condition on northwest side of site



Minor erosion on northeast side of site beginning on east side of parking lot, and off the main landfill cap



Appendix E

91R 03625 91R 036255

RESOLUTION NO.

1- Recorder 1-MTC

RESOLUTION CREATING A COVENANT RUNNING WITH THE LAND ON THE MUNICIPAL LANDFILL OF THE CITY OF WOODSTOCK, MCHENRY COUNTY, ILLINOIS

WHEREAS, the CITY OF WOODSTOCK, is the owner of the tract of land upon which the now closed WOODSTOCK MUNICIPAL LANDFILL is located; and,

WHEREAS, the CITY OF WOODSTOCK has been designated as a potentially responsible party (PRP) by the United States Environmental Protection Agency (U.S.E.P.A.) pursuant to the provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and is now participating in a remedial investigation/feasibility study (RI/FS) pursuant to an administrative order by consent effective October 14, 1989; and,

WHEREAS, it is necessary that the CITY OF WOODSTOCK, McHenry County, Illinois finally determine the use or uses to which said real estate may be used in the future and forever prohibit certain activities on said real estate:

Return to:

The Northwest Quarter of the Southeast Quarter of Section 17, and the Southwest Quarter of the Northeast Quarter of Section 17, (excepting and reserving therefrom that part thereof bounded and described as follows to-wit: Beginning at a post at the Northwest corner of the last described forty; thence East 8 chains 17 links to a post; thence South 74 1/4 degrees West 8 chains and 48 links to a post; thence North 2 chains and 50 links to the place of beginning. ALSO: A part of the Northwest Quarter of the Northeast Quarter of said Section 17, bounded and described as follows: Beginning at the Southeast Corner of said last above described forty, thence West 11 chains and 77 links; thence North 74 1/4 degrees East 12 chains and 22 links to a post; thence South 3 chains and 60 links to the place of beginning, all in Township 44 North, Range 7, East of the Third Principal Meridian in McHenry County, Illinois.

NOW THEREFORE BE IT RESOLVED by the City Council of the CITY OF WOODSTOCK, McHenry County, Illinois, that there is hereby created the following restriction:

Appendix E

91R 03b255

No well of any kind, nature or description, other than wells approved by or required by Environmental Regulating Agencies, including U.S.E.P.A., and Illinois E.P.A. as part of any site remediation or monitoring work, and no residential use or structure of any kind shall be located on or shall be built or constructed in or on the following described real estate:

The Northwest Quarter of the Southeast Quarter of Section 17, and the Southwest Quarter of the Northeast Quarter of Section 17, (excepting and reserving therefrom that part thereof bounded and described as follows to-wit: Beginning at a post at the Northwest corner of the last described forty; thence East 8 chains 17 links to a post; thence South 74 1/4 degrees West 8 chains and 48 links to a post; thence North 2 chains and 50 links to the place of beginning. ALSO: A part of the Northwest Quarter of the Northeast Quarter of said Section 17, bounded and described as follows: Beginning at the Southeast Corner of said last above described forty; thence West 11 chains and 77 links; thence North 74 1/4 degrees East 12 chains and 22 links to a post; thence South 3 chains and 60 links to the place of beginning, all in Township 44 North, Range 7, East of the Third Principal Meridian in McHenry County, Illinois.

BE IT FURTHER RESOLVED that this restriction shall be deemed a permanent covenant running with the land which shall forever bind the CITY OF WOODSTOCK,

McHenry County, Illinois, and it successors and assigns in perpetuity.

BE IT FURTHER RESOLVED that this resolution is a permanent resolution of public policy of the CITY OF WOODSTOCK and may not be amended or repealed by any subsequent City Council.

Appendix E

918 036255

BE IT FURTHER RESOLVED that this resolution be spread at length upon the minutes of the meeting of this City Council and recorded in the Office of the Recorder of Deeds, McHenry County, Illinois.

ADOPTED BY THE CITY COUNCIL OF THE CITY OF WOODSTOCK, MCHENRY

COUNTY, ILLINOIS THIS /7 DAY OF SEPTEMBER, 1991.

AYES: 5 NAYS: 0 ABSENT: O

Adopted: Approved:

Document Prepared by:

Michael T. Caldwell

CALDWELL, BERNER AND CALDWELL.

100 1/2 Cass Street, Box 1289 Woodstock, Illinois 60098

Telephone: (815) 338-3300

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Appendix F State Notification

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF SR-6.I

May 14, 2019

Mr. Chris M. Peters
Site Coordinator
Illinois Environmental Protection Agency
Bureau of Land, Federal Site Remediation Section
1021 N. Grand Ave East
Springfield, Illinois 62797-9276

Re:

Notification of Five-Year Review Start for the Woodstock Municipal Landfill Site.

Woodstock, Illinois

Dear Chris Peters:

This letter is to notify you that the U.S. Environmental Protection Agency (EPA) is starting the five-year review (FYR) for the Woodstock Municipal Landfill Site in Woodstock, Illinois.

EPA is conducting a statutory FYR for the Site as required by Section 121 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). The purpose of the review is to evaluate the remedy implemented at the Site and determine if the remedy remains protective of human health and the environment.

The FYR for the Site is due by August 19, 2019. This notice is provided so EPA and the Illinois EPA can begin the necessary coordination activities. As you know, the FYR Site Inspection is scheduled for May 16, 2019. Additionally, I am working with the EPA Community Involvement Coordinator to notify the public of the FYR.

If you have any questions or would like to discuss the FYR for the Site further, please feel free to contact me at (312) 886-4466 or via email at <u>Lagunas.Frank@epa.gov</u>.

Sincerely,

Frank Lagunas

Frank Trauman

EPA Remedial Project Manager

Public Notice

Appendix G



Madison Becnel, left, and Cassidy Platte hand out tickets to "Crawl," a horror film about alligators, on Thursday at Chicago's Humboldt Park.

Alligator watch captures attention, but not elusive Chance the Snapper

Chicago Sun-Times

The search for the Humboldt Park Lagoon alligator stretched into its third day Thursday, drawing more onlookers to the park on Chicago's West Side.

Chicago Bulls Benny showed up. So did two people promoting a new horror movie about alligator

And a day camp in the park worked alligators into nature lessons.

But the good humor and natural curiosity have a dark underside — the abuse of animals, the risk to others and the lawbreakers who insist on keeping illegal pets.

"This is a wild animal doing what wild animals do," said "Alligator Bob," the volunteer reptile expert who has set traps and been trying to catch the alligator, who has been nicknamed "Chance the Snapper" by some on social media, since Tuesday.

"This animal, for his entire life, has been raised in an aquarium tub or a bathtub or something. And suddenly he's in this huge lake."

He's "scared" and likely hiding, especially during the day, given all the onlookers and

commotion, Bob said. Authorities believe someone likely dumped the gator once it became too big to keep as a

"People have exotic tastes in pets, and then the pets get big," Mayor Lori Lightfoot said Thursday. "And then they lose their interest. So I think the larger conversation that we have to have is about people being realistic about the kind of pets that they can bring into their home."

"Alligators can be very dangerous. They can travel on the land at great speeds. And we want to make sure that nobody in that community was injureď."

Elana Porat, who teaches about nature at the Tinker



An alligator who has been nicknamed "Chance the Snapper" swims in the Humboldt Park Lagoon Wednesday morning.

Garten day camp in the park, is injured and that we relocate local phenomenon to bring people together at the park."

"We were going to sing a song about sparrows. So we added a verse about alligators," Porat said Thursday. "It's about getting kids excited about

Cassidy Platte and Madison Becnel were sent to the park to hand out free tickets to "Crawl," a movie about people being menaced by alligators during a hurricane.

As Alligator Bob remained "on the case," as the mayor put it, Lightfoot maintained a sense of humor about a hunt that has captivated Chicagoans and become social media fodder

for animal lovers all over. "I'm following Gator-gate, yes. And my hope is that we'll be able to locate the alligator and make sure that people in the surrounding communities

are safe," the mayor said. "It's always an urban myth that there's alligators here, there, climbing out of toilets and things like that."

The Block Club Chicago news website has spearheaded a naming contest, but Lightfoot isn't entering.

"I don't have an opinion about the name," the mayor said. "I just hope that the alli-

said "there's nothing like a it to a zoo or some other proper venue."

> Five traps have been set in the water, baited with chicken, rat and fish.

> Alligators are not to be bred, sold or offered for sale in Illinois, according to state law. Possession is allowed only with a special use permit, and permits are intended only for alligators that are used "for bona fide educational programs, following an inspection and approval of the proposed facilities." Violation of the law is considered a misdemeanor.

> Abandoning an animal also violates state law and is a misdemeanor for a first offense.

"I would like to call the owner an idiot," Alligator Bob said Thursday.

Alligators, he said, can live 60 to 80 years — but they can't survive a Chicago winter

"This is not a hamster or a gerbil or a goldfish that's dead in a couple weeks and you flush it down the toilet. This is an animal that can live as long as a human being, so we're doing our best to help it," he

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'Dirty tricks' not crime, Madigan's lawyers argue

Chicago Sun-Times

Political candidates have a constitutional right to run no matter the reason — and "dirty tricks" are not a federal crime, lawyers for Illinois House Speaker Mike Madigan declared in a court filing this

That assertion comes in a federal case that alleges the powerful Southwest Side Democrat planted two "sham" candidates on the ballot, the central complaint of a lawsuit stretching into its third year.

Jason Gonzales, an unsuccessful 2016 primary challenger to Madigan, contends the head of the Democratic Party of Illinois planted fake candidates in the race to split the Hispanic vote in his Southwest Side district. Lawyers have worked hard to dissect Madigan's political operations in the matter.

They notched a big victory last September in getting the 76-year-old political power broker to sit down for his first deposition.

On Monday, Madigan's lawvers advanced two defenses in the case: the First Amendment right "to participate in the political process" and the "First Amendment right to seek access to ballot and run or

While Gonzales' attorneys claim the two candidates' presence on the ballot was "unlawful," Madigan's attorney Adam Vaught writes that both candidates, Joe Barbosa and Grasiela Rodriguez, had the First Amendment right "to seek access to the ballot and to run for public office."

"As argued by Defendants in their Joint Brief in Support of Summary Judgment, Plaintiff, at best, alleges Barbosa and Rodriguez were spoiler candidates who would have served if elected, but whose presence on the ballot made it more dif-



A lawsuit alleges Illinois Speaker of the House Michael Madigan, a Chicago Democrat, planted fake candidates in his 2016

lawyers argue in the filing. "But complaints about campaign strategies, even 'dirty tricks' that successfully undermine candidates are not actionable in federal court."

primary race.

"Even if Plaintiff's allegations were true, Defendants' purported conduct would be protected by the First Amendment," the filing says.

In other words, dirty tricks count as free speech.

The filing states that defendants have the "right to engage in political activity in support of or opposition to a candidate for public office, and accordingly, any conduct by Defendants in support or opposition, whether alleged or otherwise, is protected."

And while Madigan's lawyers have long asserted Gonzales was a "plant" of the Illinois Republican Party and former Gov. Bruce Rauner a claim both Gonzales and Rauner have denied — the filing this week notes that Gonzales' attorneys claimed it was 'completely legal" if he "affiliated and coordinated with the Republican Party" as a Democratic candidate.

At the same time, Madigan's lawyers note, Gonzales attorficult for Gonzales to win," the neys are claiming Barbosa and

Rodriguez should not have been allowed to run "because their intent was to take votes from Plaintiff.

"But there is no intent requirement to run for office under Illinois law."

Madigan beat Gonzales 65.2% to 27.1%. Rodriguez got 5.8% and Barbosa 2%.

The Illinois State Board of Elections shows a different spelling, Barboza, for the latter candidate's name.

Reinstating the federal case in September 2017, U.S. District Judge Matthew F. Kennelly said a constitutional issue may arise with Gonzales' claim that there was "vote dilution" in the alleged placement of two fake candidates on the ballot.

"The fact that Gonzales argues the effect of this fraud was to dilute the Hispanic vote — the two alleged sham candidates have Hispanic surnames — does not negate the fact that the registration of sham candidates can, on its own, constitute a deprivation of a constitutional right," Kennelly wrote in 2017.

• This report was produced in partnership with the Chicago Sun-Times. For related coverage, visit chicago.suntimes.com.



EPA Reviewing **Woodstock Municipal Landfill Superfund Site** Woodstock, Illinois

U.S. Environmental Protection Agency, in consultation with Illinois EPA, is conducting a five-year review of the Woodstock Municipal Landfill Superfund site located on the south of Davis Road, southwest of the intersection of U. S. Route 14 and Illinois Route 47, to ensure the cleanup continues to protect people and the environment. The Superfund law requires reviews at least every five years at sites where the cleanup is complete, but waste remains managed on-site.

The Site was first used as a trash dump and for open burning in 1935. The City of Woodstock acquired the landfill property in 1968 and thereafter used the landfill for disposal of household and municipal solid wastes and various industrial wastes.

EPA's cleanup of contamination at the landfill consisted of capping the landfill, a pump-and- treat system for ground water, long-term monitoring and limits on use of the site and access to the site. The review found that the cleanup continues to protect people and the environment. This is the fourth five-year review for this site.

Information on the Woodstock Municipal Landfill Superfund site can be found at the Woodstock Public Library, 414 Judd St., Woodstock, IL, and at http:// www.epa.gov/superfund/woodstock-muni-landfill.

EPA encourages public comment. Written comments should be postmarked no later than July 19, 2019. You may also communicate your questions or concerns by telephone or e-mail. If you have questions or need more information, contact:

Frank Lagunas

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